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1955

72 YEARS
OF
C.P.R. PROGRESS

OCTOBER 21, 1880
TO
DECEMBER 31, 1952





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72 YEARS OF C.P.R. PROGRESS

(October 21, 1880 to December 31, 1952)

CONCEIVED in 1880 to save confederation in Canada, the Canadian Pacific has grown to be the world's greatest travel system.

An unique and distinctively Canadian enterprise, its original role was that of the wedding ring in national unity. The emergence of Canada today as one of the leading manufacturing and producing nations of the world is the fruit of that union.

Tracing the role of transportation in an expanding economy, Mr. W. A. Mather, President of the Company, while addressing the 71st annual general meeting of shareholders said: "The integration of Canada as a vigorous nation, the growing forestry and mining activities of Quebec and Ontario and the expansion of agriculture in the Prairies, were made possible only by the construction of railway mileage."

The Company was a railroad only in 1886, when its first through passenger train travelled from Montreal to the Pacific, with express, Great Lakes boats and commercial telegraph branches as its chief auxiliaries. Since then it has added ocean steamships, hotels, air lines and full-fledged organizations in Europe and the Orient providing worldwide service.

Its combination of Atlantic steamers, transcontinental rail line and Pacific vessels made the Northwest Passage the route from England to the Far East, in the vain quest for which many mariners died.

It has played a leading role in agriculture, mining, lumbering and manufacturing as a transportation agent, and sometimes as an active participant, while its immigration policies helped to settle the Canadian West.

20,881 MILES OF RAILWAY

As of December 31, 1952 it owned and controlled 20,881.9 miles of railway serving all the important industrial, commercial and agricultural sections of Canada with lines entering important areas in the United States. The Company maintains 3,000 stations in Canada and some 200 outside offices.

In the mechanical field three huge main shops and a network of smaller ones have been developed for locomotive and car work and many advances in the art of railroading have been fostered in them since their beginnings in 1882, when "an official memorandum on the position and prospects of the C.P.R." listed shops at Montreal for the manufacture of locomotives and passenger cars, at Perth for the manufacture of freight cars and at Winnipeg and Carleton Place for general repairs.

At the outbreak of World War II it had in service 49 steamships with a gross tonnage of 399,517 tons, on the Atlantic and Pacific oceans, the Great Lakes, the British Columbia coast, inland lakes and rivers, the Bay of Fundy, and for cruises to the West Indies, Scandinavia and the Baltic and round the world, and held a half-interest in a line to the South Pacific (Australia and New Zealand). Physical operation of its ocean services proper is the work of Canadian Pacific Steamships Limited.

At the end of the war, the Company's fleet had suffered losses in action more severe than those of any other operator. In 1953, it operated some 145,153 gross tons of shipping, and offered weekly passenger sailings from Montreal and Quebec City to the United Kingdom, during the St. Lawrence sailing season.

Three "Empress" class liners, the 26,313-ton luxury ship Empress of Scotland, the 20,488-ton Empress of France and the 19,600-ton Empress of Australia comprise the Company's passenger liners. An order for a 22,500-ton passenger liner was placed early in 1953. Seven 10,000-ton "Beaver" class fast cargo liners, the Maplecove, Mapledell (now serving on the Pacific Ocean), Beaverglen, Beaverlake, Beaverburn, Beaverlodge and Beaverford, the latter three of which are fitted with passenger accommodation for 12 persons, plus the immigrant ship Beaverbrae round out the C.P.S.S. ocean going fleet.

In addition, it continues to operate ships on the British Columbia Coast and across the Bay of Fundy.

Its 14 splendid hotels in Canadian cities and Summer resorts, together with 5 lodges in the Canadian Rockies and in Ontario, are known the world over for the utmost in service and comfort.

199,643 MILES OF TELEGRAPH WIRE

Over its vast communications system of 199,643 miles of telegraph wire messages go to all parts of Canada, with connections to the United States and to every part of the world. Provision of the overland link for the first "All Red Route" for Empire cables from Great Britain to Australia was one of the major contributions by the communications department.

World-wide transportation and financial service is offered by Canadian Pacific Express Company, which operates over land and sea for 21,383.03 miles. Its organization includes 7,141 offices and correspondents here and abroad with Canadian Pacific travellers' cheques being honored in the remotest parts of the globe.

CANADIAN PACIFIC AIRLINES

Although only 11 years old Canadian Pacific Airlines, born in 1942 with the amalgamation of ten independently operated "bush" lines, is now one of the leading air lines on the continent and has furthered Canada's position as a centre of world aviation and carried the Canadian flag into the far-flung ports of the Pacific. The line operates 9,525 miles of domestic routes and another 15,295 across the Pacific from Vancouver to Australia and the Orient.

The transpacific routes are from Vancouver to Sydney, Australia, via Honolulu, Canton Island, Fiji Islands, and Auckland, N.Z., and from Vancouver to Tokyo and Hong Kong. Another international route from Vancouver to Mexico City and Lima, Peru, is planned to connect with the North Pacific service.

The domestic services are made up mainly of a series of north-south routes based from Vancouver, Edmonton, Regina and Winnipeg and terminating at such far-flung outposts as Fairbanks, Alaska, Aklavik on the Arctic coast, and Churchill,

Man., on Hudson's Bay. In the east, Montreal and Quebec are connected with north shore towns on the lower St. Lawrence, while another service operates from Montreal and Toronto to the mining communities of Earleton, Ont., Rouyn-Noranda, Que., and Val d'Or, Que.

With the advent of the United Nations' war against communist forces in Korea, the orient route took on new importance in the vital chain of communications between North America and Japan, and was an active participant in "airlift" operations to and from Tokyo.

Arrangements are nearing completion for a new service between Vancouver, Mexico City and Lima, Peru, with direct connections with the orient operation.

Canadian Pacific provided one of the bright chapters in Canada's war effort during World War II, giving service to the far northern developments, assisting the British Commonwealth Air Training Plan and developing the transatlantic bomber ferry service.

The north-south routes of Canadian Pacific Air Lines provided the transportation service needed for the emergence of the Alaska Highway, the Northwest Joint Defence Air Route, the oil wells and the pipe line of the Canol project, and the freighting of vital minerals including the uranium used for the first atomic bomb from the North.

At one time the air lines operated seven air training schools and managed five aircraft repair and engine overhaul plants, and in 1944 a total of 56,394,000 training miles was flown by six air observer schools.

The flying of giant bombers to beleaguered Britain was a Company organization which pioneered the organization later taken over by the Royal Air Force and known as the "Ferry Command".

The Company serves a country in which the population has grown from 4,325,000 in 1881, when the original Canadian Pacific Syndicate assumed the monumental task of connecting the Atlantic and the Pacific, to more than 14,000,000.

An even truer guide to progress than a comparison of population comes from setting operating and financial figures for 1886,

when the main line was opened, and earlier, side by side with those for 1952 in the following table:

	1886	1952
Total Assets:	\$161,485,798.65	\$1,917,505,660.00
Transcontinental train time:	5½ days: Montreal to Port Moody	3¾ days: Montreal to Vancouver
Line mileage of railway:	4,406: Built-acquired (In 1881 — 713 miles, taken over from Govt. and completed by C.P.R.)	20,881.9: Owned and controlled
Locomotives, other rolling stock:	751 (in 1882)	90,910
Weight of rails:	56 lbs. per yd.	100 lbs. per yd., main line; 130 lbs. per yd., Stephen to Revelstoke, and 82.6 miles on Kootenay Division

GREAT NATIONAL WORK

Montreal was Canada's largest city in the early days of the Company (155,238 population in 1881), just as it is now (1,395,400 in 1952), but, elsewhere along the transcontinental line, amazing changes show what a great national work the Canadian Pacific was.

Winnipeg, now Canada's fourth largest city, with a population of 354,000 was a boom town of 25,000 in those days, with the first C.P.R. train running into that city over the Louise Bridge on July 26 of 1881. There was no Vancouver, now third for the Dominion with over 530,000 residents.

Sudbury and the thriving Nickel Belt were just bush country where a curious construction gang foreman, Tom Flanagan, in 1883, was to investigate an outcrop of rock and find copper sulphide before the cutting of a grade on the right of way exposed the ore deposit which led eventually to the nickel empire.

Equally wild was the head of the Great Lakes, where the skyline of Port Arthur and Fort William now is pierced by towering grain elevators, and, farther on, Kenora (then Rat Portage), which now boasts a gigantic flour mill.

Regina, first named Pile o'Bones, because buffalo bones were the only freight it had to offer, knows what the Canadian Pacific has meant in making it the Queen City of the great granary of the Prairies.

FIRST MOVE INTO "CONSOLIDATED" IN 1897

Other symbols of the development the Company has nurtured could be the coal mines and sugar beet fields in the Lethbridge district, and the giant smelter of the Consolidated Mining and Smelting Company at Trail, the first edition of which was mentioned in the annual report of 1897. It states that "the smelting works at Trail Creek," built by F. Augustus Heinze, was among the undertakings of the Columbia and Western Railway Company which the Company was buying that year. In 1951, the Company received \$18,507,500 in dividends from its half interest in C.M. & S.

All of this growth is part of the story of the Canadian Pacific — a story of courage, honesty and steadfastness and one which has contributed much to the drama which has colored Canada's way of life. An epic of personal sacrifice and effort, the saga of the Canadian Pacific can stand with anything in the Dominion's past from the days of French Canada's fur traders and Indian fighters down to the present.

FIRST CONTRACT IN 1880

The story started on October 21, 1880, when the Government of the day, headed by Sir John A. Macdonald, signed a contract with the original Canadian Pacific Syndicate. This was ratified February 15, 1881, and taken over by the incorporated Canadian Pacific Railway Company. It called for the transcontinental line to be completed 10 years later. Actually the line was in operation four years and six months later, a saving of five and one-half years of the contract, after one of the great engineering feats of history, and by July 1, 1886, all loans made to the Canadian Pacific during construction were paid in full.

Summarized, the construction period was as follows:

Date set by contract for completion of transcontinental line — May 1, 1891.

Date of actual completion — Nov. 7, 1885.

Time allowed by contract for completion of transcontinental line — 10 years.

Actual time taken by Company for completion — 4 years, 6 months.

Time saved from contract — 5 years, 6 months.

Under the contract the Company undertook to build from Callander (now Bonfield) to Port Arthur and from Winnipeg (Selkirk) to Kamloops via Yellowhead Pass (the line actually was built through Kicking Horse Pass, shorter but in more difficult ground). The Government undertook to build or complete for the Company from Port Arthur to Winnipeg and from Port Moody to Kamloops. All was to be completed, equipped and in running order on or before the first day of May, 1891. Under its charter the Company was given wide powers to acquire other railroads by amalgamation, purchase or lease.

In payment for the desperately needed link with the Pacific, the Government contract called for the syndicate to receive partially constructed railways to the cost of \$27,700,000, a cash grant of \$25,000,000 and 25,000,000 acres of land. Terms of the bargain were favorable to the Government as compared with the assistance given to similar projects in the United States.

Actually when measured against the terrific cost in men, money, brains and courage required to put the line through such difficult terrain as Lake Superior's north shore and the Canadian Rockies, the sums granted were mere drops in the bucket.

\$700,000 FOR MILE OF TRACK

The difficulties which had to be overcome were staggering. For instance a mile of track around Jackfish Bay off Lake Superior cost \$700,000 and \$500,000 was not an unusual cost per mile at many points in the Rockies.

Problems entirely new to railway construction up to that time had to be met and vanquished by the men primarily responsible, George Stephen, William C. Van Horne and Thomas G. Shaughnessy. All three later received in peerage or knighthood recognition of their services to Canada and the British Empire —

Stephen being made first Sir George and then Lord Mount Stephen, Van Horne being created a Knight Commander of the Order of St. Michael and St. George, and Shaughnessy first becoming a Knight and then being raised to the peerage with title of Baron Shaughnessy.

As told in the records of the right of way and lease department the story of construction on the Company's end of the contract is:

Central Section extending from Stephen Street in Winnipeg to Savonas Ferry, B.C., 25 miles west of Kamloops. Work was commenced in 1881 westward from Winnipeg and the points which the lines had reached in succeeding years were: 1882—To 94 miles west of Swift Current; 1883—To Stephen, 122 miles west of Calgary; 1884—To Rogers Pass (summit of the Selkirks) from Stephen (summit of the Rockies); 1885—To Savonas Ferry. (The Last Spike was driven on November 7, 1885, at Craigellachie, 290 miles west of Calgary and high in the Selkirks, by Donald A. Smith, who later became Lord Strathcona and High Commissioner for Canada in London. In the same period, government construction had pushed the line eastward from Port Moody, B.C., to Craigellachie.

Eastern Section from Callander (Bonfield) to Port Arthur. Construction was started in 1881 and points reached in succeeding years follow: 1882—To Sturgeon River (40 miles from Callander); 1883—To 167 miles west of Sturgeon River; 1884—Track laying completed to Port Arthur. (The rails connecting Montreal and Winnipeg were linked at Noslo, Ont., west of Jackfish, on May 16, 1885, with the last spike being driven by Colonel Oswald of the Montreal Light Infantry en route to the Northwest Rebellion.)

That the construction of the C.P.R. was a service of nation building may be proved by a review of conditions prior to the start of operations in forging the bond required before confederation could work in a country as widespread as the Dominion.

There had been some growth in the population of Canada in

the decade prior to 1880 due to immigration and it was then perhaps, that Canada came to be looked upon, by British people and Europeans alike, as a country in which they could establish homes on land of their own with the freedom of thought and action and the chance to prosper to which all naturally aspire.

Confederation of Ontario, Quebec, Nova Scotia and New Brunswick had been effected in 1867. On the pledge that it would very soon be connected with eastern Canada by a railway, British Columbia had entered in 1871, 20 years after Joseph Howe, the great Nova Scotian, had made the remarkable prophecy which the C.P.R. was to realize.

JOSEPH HOWE'S VISION

In that vision of what was to come, Howe said at Halifax in 1851: "I am neither a prophet, nor the son of a prophet, but I believe that many in this room will live to hear the whistle of the steam engine in the passes of the Rocky Mountains and to make the journey from Halifax to the Pacific in five or six days."

Politically established with the entry of British Columbia in 1871, a year after Manitoba had come in and two years before Prince Edward Island made its move, and with its feet upon the path of economic progress, the new Dominion could never reach full development without some such nation-building agency as the Canadian Pacific later proved to be.

WEST ISOLATED FROM EAST

The older portions of Canada had some railway service with the Grand Trunk and the Intercolonial linking up Halifax and southwestern Ontario. But the Pacific Coast and western territory lately transferred from the Hudson's Bay Company was isolated.

No time could be lost. Manitoba, growing slowly but steadily, was looking to United States railways as an outlet for its wheat crop. British Columbia, sickened by continued postponement of a start on conquering the mountains separating it from the rest of the Dominion, began to talk of secession.

The urgent necessity of railway construction as a means of holding the West was understood as early as 1870 by Sir John A.

Macdonald who wrote a letter, now in the Dominion Archives in Ottawa, that "it is quite evident to me not only from this conversation but from advices from Washington, that the United States Government is resolved to do all they can, short of war, to get possession of the western territory, and we must take immediate and vigorous steps to counteract them. One of the first things to be done is to show unmistakably our resolve to build the Pacific Railway . . . it must be taken up by a body of capitalists and not constructed by the government directly."

However, in 1873, the government changed and Alexander Mackenzie succeeded Sir John as premier and he had different ideas regarding the Pacific road.

He evolved a less costly plan, building a line that would cross the country partly by rail and partly by water, using the Great Lakes to avoid formidable engineering difficulties on the north shore of Lake Superior. He let contracts for construction of the easier parts of this route, one of the first to be started being a line from a point east of the Red River in Manitoba to the present site of Fort William — then Prince Arthur's Landing. The Government limited its expenditures in British Columbia and the Rockies to surveys of the various possible routes and passes.

TYPICAL OF GOVERNMENT BUILDING

But progress was slow for the four or five years that followed and the Government found itself handicapped in every direction by those evils which later experience has shown to be the common lot of all governments when they invade the field that properly belongs to private enterprise. The country became dissatisfied and when Sir John Macdonald came out in 1878 with proposals for what he called the "National Policy" and vigorous action in building the transcontinental line the voters swept him back into power with a clear mandate to go forward.

Sir John's government, however, found itself beset by the same difficulties that had harassed his predecessor, but in 1880, Sir Charles Tupper, minister of railways, let a contract for construction of a line eastward through the mountains, doing this in the face of much political and other opposition. Pieces of the line

constructed had both their ends in the air and nowhere was there any confidence in the ultimate success of the venture.

The turning point, it seemed, was not far off. Heartily sick of government railway building, public opinion was fast resolving that the line should be turned over to private enterprise, provided a strong, responsible group could be found to undertake it.

Canada turned in her hour of need to the mother country. Sir John Macdonald, accompanied by Sir Charles Tupper and Hon. John Henry Pope, journeyed to England to interest British capitalists in the scheme but received little encouragement. The difficulties of the plan from the physical side were too apparent even at that distance and enemies of the line in Canada had been using their powerful connection in London to effectively undermine the project.

Against these combined forces of political and economic opposition and the physical difficulties, however, were soon arrayed in Montreal as courageous a group of men as ever were inspired by the idea of empire-building.

STEPHEN FIRST PRESIDENT

Courage and faith in his adopted country led Stephen to become the first president of the Canadian Pacific Railway Company, and the group which he headed completed the bargain with Sir Charles Tupper to take over the whole project of the Canadian transcontinental line.

The Government had failed to do the work itself, and the difficulties were still as great, but opposition to the scheme still was rampant, and in England was epitomized in the devastating article appearing in "Truth" which described the Pacific railway as a foolish and fantastic waste of money, saying that the "Canadian Pacific, if it is ever finished, will run through a country about as forbidding as any on earth . . . British Columbia is not worth keeping. It should never have been inhabited at all . . . In Manitoba those who are not frozen to death are often maimed for life by frostbites. Ontario is poor and crushed with debt. It is certain to go over to the States and when that day comes the Dominion will disappear."

At home and abroad the campaign continued with political

stump speeches, newspaper editorials and magazine articles, more or less in keeping with "Truth's" attack, from 1871 to 1885. A prominent newspaper declared the C.P.R. would never pay for its axle grease. It was only the lash of party discipline wielded by Sir John and his close colleagues that put the scheme through Parliament.

KEPT LINE IN CANADA

But they were dauntless, these Canadian Pacific builders — Stephen, Duncan McIntyre, Richard B. Angus, Donald A. Smith, John S. Kennedy and James J. Hill, and five of them — Stephen, Angus, Smith, Kennedy and Hill — had made such a great success of the bankrupt St. Paul, Minneapolis and Manitoba Railway a few years before as to be in a financial position to undertake the terrific task of building Canada's confederation Line.

Jim Hill did not stay long with the Company. Insisting that the line should be built through the United States between Ontario and Manitoba, while both the Government and his associates in the Company insisted it should stay in Canadian territory along the north shore of Lake Superior, Hill resigned his directorship in disgust on May 3, 1883, and became an implacable foe.

While Stephen, McIntyre, Angus and Smith wrestled with monumental problems of finance they brought to their aid for the practical work of railway building Van Horne, and to his amazing resourcefulness, energy and strength of character must go much of the credit for the successful completion of the project, as with mighty drive, he surged on over a succession of obstructions and heart-breaking difficulties.

Van Horne's talents fitted him to be the dynamic leader "in the field" of the thousands of men who played their parts in this drama of empire building to earn a place in the fine tradition that has grown with the years around the Canadian Pacific. They left a heritage to those whose duty and privilege it has been to carry on since.

Canada, England, the United States and France were represented in the original Canadian Pacific Syndicate. The letters patent to the Canadian Pacific Railway Company, in which is

embodied a copy of the contract of 21st October, 1880, show that the contract was made between the Government of Canada and George Stephen and Duncan McIntyre, of Montreal; James J. Hill and Richard B. Angus, of St. Paul; John S. Kennedy, of New York; Kohn, Reinach & Company, Paris; Morton, Rose & Company, London.

The Company was incorporated February 16th, 1881.

First Canadian Pacific Directorate, 1881 — the directors at the time of the first meeting on 17th February, 1881, were: George Stephen, President; Duncan McIntyre, Vice-President; John S. Kennedy, Richard B. Angus, James J. Hill, H. Stafford Northcote, Pasco du P. Grenfell, Charles D. Rose, Baron J. de Reinach.

FORMATION OF COMPANY AND CONSTRUCTION

Red letter dates in early Company history were:

Contract signed with Canadian Pacific Syndicate.	Oct. 21, 1880
Contract ratified by Parliament	Feb. 15, 1881
Canadian Pacific Railway Co. incorporated . .	Feb. 16, 1881
First sod turned	May 2, 1881
Prairie Section of main line finished.	Aug. 18, 1883
Lake Section finished	May 16, 1885
First Winnipeg-to-Montreal train.	Nov. 1, 1885
Last Spike driven at Craigellachie in Eagle Pass .	Nov. 7, 1885
First Montreal-to-Pacific train	June 28, 1886

The Canadian Pacific Railway was built for the most part through a wilderness where men had to be both housed and fed by the Company while immense distances, the muskegs and the mountain barrier offered new problems.

START MADE ON MAY 2, 1881

Construction began on May 2, 1881, when the Company took over 162 miles of lines built by the Government from Selkirk to Pembina and from Selkirk to Cross Lake. By December the main line was located as far as Moosejaw Creek, and trains were running over the 145 miles between Winnipeg and Brandon.

Van Horne became General Manager on December 2, 1881, and took over at Winnipeg on New Year's Day of 1882. He brought with him as general superintendent, John M. Egan, who had served him well on construction on the Southern Minnesota Railroad, and 10 months later put Shaughnessy in charge of purchasing at Montreal as chief purchasing agent. In September 1882 he made Henry Beatty manager of lake transportation in preparation for operation of the Owen Sound-to-Port Arthur steamer service, which in 1884, made possible an all-Canadian route, from East to West, rail and water, before the rail line was completed.

Floods on the Red River delayed the start in the Spring of 1882. When conditions permitted, Van Horne swung 5,000 men and 1,700 teams into action on the Prairies. On February 16, trains were running from Winnipeg to a point 31 miles west of Brandon and on October 3 they were running 356 miles to Regina. Six hundred and twenty-nine miles of track had been located and 508 miles built, besides 897 miles of telegraph lines and 32 stations.

Van Horne drove the Prairie Section to completion in 1883, on August 18, with Calgary being reached on August 10, and an average of three and a half miles of track a day was laid during that summer. Trains were in operation over 881 miles of section by September.

VAN HORNE CREATED TRAFFIC

When mileage in operation had increased from 748 to 1,552 Van Horne set to work to create traffic. He constructed grain elevators at Head-of-the-Lake and Winnipeg, built at Lake-of-the-Woods a flour mill, since grown into one of the largest milling concerns in the world, bought timber lands in Ontario and laid plans for a string of hotels, with the start on the first of them, Banff Springs Hotel, being made in 1887.

To demonstrate the fertility of the Prairies to the skeptical he broke ground for 10 model farms west of Winnipeg, forerunners of the model supply farms in the west and powerful aids to the land settlement program, aggressively pushed since Stephen first formulated plans for a Ready-Made Farm Scheme in

London in 1880, Hill brought 20,000 settlers to the West in 1881 and John H. McTavish was made first land commissioner.

Express service from Prince Arthur's Landing (now Fort William) commenced May 14, 1883, via the steamer "Campana," connecting with Vickers Express, which operated on the Toronto Grey & Bruce Railway — this being the first all-Canadian express service between eastern and western Canada. A year earlier the Company operated its first express service — over 291 miles from Rat Portage (now Kenora) to Oak Lake, Man., and the 20 miles from Winnipeg to Stonewall — with headquarters in Winnipeg.

"200 MILES OF ENGINEERING IMPOSSIBILITIES"

Work on the difficult Lake Section had started in the Spring of 1883. Van Horne later described part of it as "200 miles of engineering impossibilities". But the line was built with 12,000 men and 5,000 horses being employed. Later Van Horne put a track-laying machine to work to aid construction over mosquito-infested swamps. Two hundred miles of track on this section cost \$12,000,000 to build. They were Van Horne's "impossibilities".

Three dynamite factories were built. The dynamite used cost \$1,200,000.

The three miles of track around Jackfish Bay cost the Company \$1,200,000. Between Sudbury and Cartier a lake had to be lowered 10 feet to get a foundation for track.

On May 16, 1885, when the entire section was opened to get troops through to the Northwest Rebellion, the speed with which these troops reached their objective, as compared with the Wolseley Expedition in the Riel Rebellion, helped the Company's financial position at a critical period.

This opening of the rail line at Noslo came roughly a year after the start of Company steamship service on the Great Lakes for which Henry Beatty had been sent to Scotland to arrange for three Clyde-built vessels.

Throughout the construction of the line north of Lake Superior supplies were brought by steamer and barge up the rivers tributary to the lake and two tugs — Butcher's Boy and Butcher's Maid — carried cattle from Port Arthur for the camps.

CHOSE SITE FOR VANCOUVER

Surveying and location parties had gone into the Rockies in 1883. Van Horne later went to the Pacific Coast and crossed the Rockies from the west side. He chose the site for Vancouver and named it. On his way east he found Calgary, Medicine Hat and Regina grown into busy towns on sites where formerly only struggling little settlements had existed.

In 1884 of Winnipeg's population of 25,000, six thousand were directly dependent upon the Canadian Pacific Railway.

That year the Government turned sections from Thunder Bay to Rat Portage over to the Company to finish. Seven successive lines of rails vanished in a muskeg on this line.

By June, 1885, the railway was open from Montreal to a point near the summit of the Selkirks, and, on September 26, 1885, notice was given from Yale, B.C., by Andrew Onderdonk, the Government contractor, that "our last rail from the Pacific has been laid in Eagle Pass today" and all employees were being paid off on the Government end of the line on September 30.

THE LAST SPIKE

Craigellachie, where the historic Last Spike was driven on November 7, 1885, lies between Sicamous and the Gold Range in British Columbia.

When that spike was driven, 4,325 miles of railway comprised the C.P.R. of that day, 1,700 miles in excess of contractual obligations.

The spike was plain, working iron and the place chosen in Eagle Pass for the historic event was named in honor of a rock "Craigellachie", in the native Scotland of Stephen and Smith, which was a gathering place for Clan Grant in time of danger. It appeared in the cable, "Stand fast Craigellachie", which Stephen sent from London to Smith at Montreal when the financial outlook was black.

Present on the late-Fall day in 1885, in addition to Smith, were Van Horne, Major A. B. Rogers, chief engineer of the Mountain Division, and discoverer of Rogers Pass through the Selkirks in following directions given him by Walter Moberly, assistant surveyor general of British Columbia in 1865; Sandford

Fleming, a director and the envoy to England in 1863 for the Red River Settlement at Fort Garry seeking a rail connection between there and eastern Canada; George R. Harris, of Boston, a director; John M. Egan, general superintendent of Western Lines; James Ross, manager of construction for the Rocky Mountain Section; John H. McTavish, land commissioner; Arthur Piers, secretary to Van Horne and afterwards manager of steamship services; Frank Brothers, roadmaster; Dugald McKenzie, locomotive engineer; Miller, porter on the private car Metapedia; E. Mallandaine, a water boy; Tom Wilson, Major Rogers' guide; Marcus Smith; Henry I. Cambie, a government engineer on the construction; and M. J. Haney, working for Onderdonk.

Major Rogers held the tie in position and Van Horne, called on for a speech, said "the work had been well done in every way." The conductor then topped it with "all aboard for the Pacific."

FIRST TRANSCONTINENTAL PASSENGER TRAIN

The first transcontinental passenger train left the old Dalhousie Station, Montreal, at 8 p.m. on June 28, 1886, and at noon of July 4th it reached Port Moody, the terminus on the Pacific Coast until the line was extended 12 miles to Vancouver on May 23, 1887. That trail-blazing train was sharp on time, with the journey taking $5\frac{1}{2}$ days.

The "Dominion" now goes from Montreal to Vancouver in $3\frac{5}{8}$ days.

In January, 1924, a silk train made the trip from Vancouver to Prescott — 2,800 miles — in 81 hours, 10 minutes. Had its destination been Montreal it would have arrived there in 84 hours ($3\frac{1}{2}$ days) if the same speed had been maintained.

TRACKAGE TO TIME OF THE LAST SPIKE AND SINCE

The Last Spike total of 4,325 miles was achieved by amalgamation, purchase and lease, as well as by construction, with a breakdown of the figure showing 2,097 miles built by the Company, 799 miles leased by the Company, 744 miles built by the Dominion Government, 375 miles purchased by the Company and 310 miles acquired by amalgamation.

Records of trackage up to November 7, 1895, include entries

showing that: Montreal was reached through amalgamation in 1881 of the Canada Central Railway (Brockville to Ottawa and Carleton Place to Callander) and purchase in 1882 of the Quebec, Montreal, Ottawa and Occidental Railway's western section (Montreal to Ottawa by the north shore of the Ottawa River). The short line connection between Montreal and Ottawa was opened in 1898, the Company having secured the line of the Montreal and Ottawa Railway when it ran from Vaudreuil to Pointe Fortune and built on from Rigaud into Ottawa . . . Connections with Ontario and the Detroit gateway to the United States came in 1884 through lease of the Ontario and Quebec Railway (Montreal West to St. Thomas and Toronto to Owen Sound), with an extension to Windsor (and Detroit) from Woodstock being completed in 1890 . . . Southern Manitoba was served in 1884 by the lease of the Manitoba South Western Colonization Railway . . . Quebec City and Montreal were joined in 1885 by the purchase of the North Shore Railway.

Since the Last Spike some important extensions in the growth of the system have been: Connection with the winter port of Saint John, N.B., by the lease in 1886 of the Atlantic and North West Railway and the use of its charter to build from Montreal through Maine to a connection with the new Brunswick Railway System leased in 1890 . . . First step to open up the fruitful Okanagan Valley in British Columbia was the lease in 1892 of the Shuswap & Okanagan Railway connection with the main line at Sicamous to complement the boats in service on Okanagan Lake . . . Connection with American lines started in 1888 when the Company became interested in the Minneapolis, St. Paul and Sault Ste. Marie Railroad Company (Soo Line) and the Duluth, South Shore and Atlantic Railway . . . Moose Jaw was connected with the international boundary in 1893 by the building of a line southeast to a connection with the Soo Line . . . The first beginnings of what was to become an alternative route through the Rockies by the Crowsnest Pass was the lease in 1893 of the Alberta Railway and Coal Company, a portion from Dunmore to Lethbridge, being purchased outright in 1897. The line through the Crowsnest Pass was built in 1897 and it connected with several leased lines serving the Kootenay district of British

Columbia . . . Access to the United States through the Buffalo gateway was secured in 1897 through the building of the Toronto, Hamilton and Buffalo Railway, a joint undertaking of the C.P.R., New York Central, Michigan Central and Canada Southern Railway Company . . . Northward extension in the West started in 1890 by an arrangement with the Calgary and Edmonton Railway to work that line for account of the owner, followed in 1900 by lease of the Manitoba and North Western Railway and construction from its western end to Edmonton, and acquisition in 1903 of the Calgary and Edmonton Railway . . . Vancouver Island rail service started in 1912 with the lease of the Esquimalt and Nanaimo Railway in an important lumbering district . . . Halifax and the Annapolis Valley of Nova Scotia first was served in 1912 through lease of the Dominion Atlantic Railway (which has had steamer connection across the Bay of Fundy between Saint John, N.B., and Digby, N.S., since 1895) . . . A link between Sherbrooke in the Eastern Townships of Quebec and Levis and Quebec City was secured in 1913 through the lease of the Quebec Central Railway . . . The Peace River country of Alberta and British Columbia came within the Company's orbit in 1920 by the lease for five years of the Edmonton, Dunvegan & British Columbia Railway and the Central Canada Railway, to be worked for account of the owners. On termination of this lease on November 11, 1926, the railways were handed back to the Provincial Government of Alberta. Then in 1929 the C.P.R. and Canadian National Railways jointly acquired what is known as the Northern Alberta Railways Company (made up of the undertakings of the Edmonton, Dunvegan & British Columbia Railway Company, Alberta & Great Waterways Railway Company, Central Canada Railway Company, Central Canada Express Company and the undertakings of the Crown in the right of the Province of Alberta concerning the Pembina Valley Railway).

The Company's network of tracks is as old as the beginnings of railroading in this country and as new as today.

One of the most historic pieces of road in the system is the Prescott-Ottawa line, built between 1852 and 1854 and acquired when the Company leased the St. Lawrence and Ottawa Railway in 1884.

At the other end of the scale is 9.5 miles of track serving Osoyoos in the Okanagan Valley, which was put into operation on December 28, 1944, when a special train came from Haynes, where the new line starts, to Osoyoos.

NO REAL "LAST" SPIKE CAN BE DRIVEN

There was a "last spike" affair at Osoyoos too, but, actually, no real "last spike" can be driven, for the Company continues to be guided by the dictum that a railway must keep growing, otherwise it dies or is eaten up by one that is growing.

The first beginnings of the service to the Orient offers a splendid example of this policy of never standing still. It was less than a month from the arrival of the first transcontinental passenger train at Port Moody on June 28, 1866, that the first cargo from the Orient was landed at this point. The W. B. Flint, an American Clipper-built barque, brought it over — 17,430 half-chests of tea — under Company charter from Yokohama. Thus was started the move into the ocean steamship field, on the Pacific in Company-owned vessels in 1891, and on the Atlantic in the newly-purchased Beaver Line in 1903, with Arthur Piers the first superintendent (1891) and then manager (1903). The first tea train left Port Moody on July 30, 1886, and arrived in Montreal on August 6.

Other services developed from sure appraisal of the needs of the times.

The British Columbia Coast Service, for instance, was born as the result of the heavy traffic between Vancouver and Victoria in the Klondike Rush to the Yukon goldfields starting in 1898. The British Columbia Lakes and Rivers Service was acquired in 1898 to protect the Kootenay and other territories open to American lines.

The founders broke with tradition where necessary, as in the birth of the communications department and the building and operation of the Company's own sleeping and dining cars.

In September of 1883 when the Company's commercial telegraph service was launched with offices at Winnipeg, railroads generally were providing pole right-of-way and operators for outside telegraph companies in return for the privilege of sending

train orders over the wires. The experiment succeeded so well that on January 1, 1886, the C.P.R. Telegraph Department was launched with C. R. Hosmer as general manager at Montreal.

It also was standard practice in those early days for railroads to rent sleepers and diners fully manned from the builders but the Company constructed its own cars and trained its own personnel to look after them on the line.

Some of the Company's pioneering moves paid off more quickly than others. The Orient service, for instance, provided a backlog of traffic which helped the Company survive the depression of 1893-95. This was two years after Shaughnessy went to China and Japan in 1891 "to look into matters generally and to make such arrangements for conducting the Company's business as he may find necessary."

The first headquarters for the Orient was established at Hong Kong by David E. Brown, first agent for freight and passenger traffic at Port Moody in 1886 and who was sent to the Antipodes and the Orient by George Olds, General Traffic Manager.

The first English office was open at 18 Parliament street, London, at the time of the initial shareholders' meeting on March 29, 1881.

In connection with the driving of the Last Spike in 1885 it was fitting that this ceremony should take place in the Rockies, as it did at Craigellachie, for it was in this "sea of rock" that the Company was to make railway history with two of the most notable engineering feats on record — the Spiral Tunnels and the Connaught Tunnel — built to reduce grades and hazards of snowslides.

SPECTACULAR ENGINEERING FEAT

The Spiral Tunnels between Hector and Field on the main line, opened for traffic in August of 1909, constitute a truly remarkable engineering achievement. Going west, the track enters the first tunnel under Cathedral Mountain, 3,255 feet in length, turns 291 degrees of a circle and emerges 54 feet lower down. The track then turns east, crosses the Kicking Horse River, and enters the second tunnel 2,922 feet in length under Mount Ogden and turning 217 degrees, emerges 50 feet lower down.

The Connaught Tunnel piercing Mount Macdonald on the main line through the Selkirk Mountains is one of the longest in the world. It is slightly more than five miles in length, is double-tracked and measures 29 feet from side to side, 23 feet from base of rail to crown and is lined throughout. It was turned over for train operation on December 9, 1916.

BRIDGES

The system boasts many other remarkable engineering jobs, particularly in bridges of which there are 3,314 on Canadian Pacific lines. If placed end to end these bridges would extend nearly 90 miles.

The world-famous Lethbridge Viaduct on the Crowsnest branch of the Canadian Pacific is 5,327 feet long, with a maximum difference in elevation of 314 feet between the river and base of rail.

The Canadian Pacific bridge across the North Saskatchewan River at Edmonton is a double-decked structure, approximately 2,550 feet in length. The rail level of the river span is 150 feet above mean water level.

The Canadian Pacific line northwest from Moose Jaw crosses the South Saskatchewan River near Outlook by a high-level bridge 3,004 feet in length. The rails are 150 feet above the river bed.

The Canadian Pacific double-leaf bascule bridge across the United States ship canal at Sault Ste. Marie has a span of 336 feet from centre to centre of the channel piers.

At Montreal, crossing the Lachine Canal, the Company's double track swing bridge is 239 feet, 7 inches long and weighs 615 tons. The difference of time between closed alignment for railway service and open alignment for canal traffic is approximately 70 seconds.

Between Lasalle and Caughnawaga crossing the St. Lawrence River the Canadian Pacific has a double track bridge 3,657 feet in length.

TERMINALS

Terminals, too, call for no little engineering skill when they are as large as those for instance in Montreal, Toronto, Winnipeg

and Vancouver. In 1951 the main track, second track, industrial track, yard track and sidings making up Montreal terminals measured 407 miles, including 90 miles of track in the new Cote St. Luc hump retarder yard. Toronto had 230 miles, Winnipeg had 280 miles and Vancouver 194 miles, with Vancouver, Coquitlam, New Westminster and the Port Moody spur included in the latter total. At Fort William the trackage of the terminals division was 140 miles.

Another major engineering project was the reclamation of large areas of arid land east of Calgary through irrigation after the acceptance of the tract there in 1903 as part of the land grant.

POST-WAR DEVELOPMENTS

Since World War II ended the Company has pursued a carefully planned dieselization and modernization program designed to improve service and achieve economies in operation.

At the end of 1952, there were 292 diesel locomotives in service with a further 73 on order to dieselize the Kootenay and Kettle Valley divisions in southern British Columbia. Other territories powered by diesel locomotives at that time were the Esquimalt and Nanaimo Railway on Vancouver Island, the Montreal-Wells River, Vt., service, freight services between Cartier and Fort William in the Algoma District, and all operations on the Rocky Mountain run between Calgary and Revelstoke.

"Diesel locomotives are being employed in territories selected with a view to obtaining the greatest advantage from the capital expended," said the annual report of 1952. "The policy has been to provide sufficient units to handle the peak volume of traffic in each of the selected territories. Servicing and repair facilities are being planned so that, whenever traffic is below peak volume, diesel power can be operated in substitution for steam locomotives on adjacent territories. In this way, the high level of utilization necessary for maximum economies can be maintained."

Other forms of modernization have included an increasing use of block signals, heavier track, new types of freight equipment, a teletype-business machine method of car tracing, improved terminal facilities and many other innovations.

In June, 1953, a \$38,000,000 order for 155 lightweight, stainless steel passenger coaches, including 36 cars of the "Dome" type was placed with the Budd Company.

"Transcontinental travel in Canada will be radically improved when we take delivery of this order commencing in 1954," said N. R. Crump, the vice-president of the company. "While we have not been unmindful of the pressing need for modernization of our passenger equipment, we were not able to build or order new passenger cars during the war years, and following the war it was our first and most urgent duty to provide new freight train equipment to meet the demands of the country's fast-expanding economy."

\$16,366 A DAY IN TAXES

The great service rendered to trade and commerce by the Canadian Pacific's vast transportation system is well known and appreciated. Less well known is the importance of the Canadian Pacific as a taxpayer.

For every day of its existence since 1883 the Company has paid more than \$16,366 in taxes.

Tax payments up to the end of 1951 totalled \$412,455,158 and covered charges on railway property and on outside operations such as hotels, express, land and communications. Neither sales taxes paid on huge purchases of materials and supplies, nor duties paid on such materials and supplies as originate outside of Canada, nor taxes on fares and berths once collected for the Government are included in this figure.

The importance of the Canadian Pacific as a purchaser of materials and employer of labor can be gauged by the fact that in the decade 1942-1951 the normal operations of the railway, express, communications, hotels and steamships required an expenditure of over \$3,317,000,000 or approximately \$6,400,000 for every week in the period.

LOW RATES

The Canadian Pacific offers freight and passenger service to the people of Canada at rates as low or lower than those of any

other country — the result of the Canadian Pacific policy is keeping fixed charges to a minimum.

In 1952 earnings per passenger-mile amounted to 2.83 cents and the revenue per ton-mile of freight was 1.30 cents, indicating the narrow margin of profit on which the Company operates.

The ratio of working expenses (excluding taxes) to gross earnings was 93.7 per cent in 1952.

Some idea of the world-wide scope the Company had attained can be had from a list of its offices — in addition to the 3,000 stations and some 200 outside offices maintained in the Dominion.

It has traffic representatives, passenger and freight, in 28 offices in 28 American cities in 20 different states, including the District of Columbia (Washington). Other U.S. territories are looked after by one agency in Hawaii and four in Alaska. In addition there are three in the West Indies.

In the rest of the world, offices are maintained in England, Scotland, Ireland, France, Holland, Belgium, Denmark, Switzerland and Germany by the European Organization of the Company. On the other side of the world Australasia is served throughout by four Canadian Pacific offices and 13 agencies serving Australia, New Zealand, Tasmania and Fiji. In addition, the Canadian Pacific maintains offices in Hong Kong and Kobe and 13 other agencies throughout the far East and Hawaii.

THE OWNERS

Who owns all this ?

The actual owners of the Canadian Pacific Railway Company are the holders of its ordinary and preferred shares.

At December 31, 1952, the distribution of these was as follows:

	Ordinary		Preference		Total
	No. of holdings	Per- centage of stock	No. of holdings	Per- centage of stock	Per- centage of stock
Canada	20,858	16.36	207	.61	11.79
United Kingdom and Other British . . .	7,352	26.59	26,488	95.64	46.62
United States	32,421	49.23	98	.37	35.06
Other Countries	3,124	7.82	1,150	3.38	6.53
	63,755	100.00	27,943	100.00	100.00

Figures for the 30 years prior to 1933 show that shareholders subscribed for a total of \$383,698,829, or a premium of \$42.11 per \$100 shares as an evidence of public confidence in Canada and the Canadian Pacific.

SIX PER CENT AFTER 24 YEARS

While every \$100 share of ordinary stock, to the end of December 31, 1926, yielded to the treasury an average of \$112, and an amount equal to \$31 per share had been turned back into the property from surpluses, etc., it was not until 1904, twenty-four years after the Company's incorporation that yearly dividends reached 6 per cent.

Dividends of 3 per cent were paid from 1885 to 1888 and 4 per cent in 1889. From 1890 to 1893, 5 per cent was paid and other dividends include: in 1894, 2½ per cent; in 1895, 1½ per cent; and in 1896, 2 per cent. The first \$25,000,000 of Canadian Pacific stock to be sold realized only 40 cents on the dollar. Common shares of the Canadian Pacific (\$100 par) sold as low as 67 in 1890, 72 in 1891, 66 in 1893, 58 in 1894 and 33 in 1895.

In tabulated form some interesting figures on the Company are:

Capital and Funded Debt

Total assets, Dec. 31, 1886, when main line was opened	\$ 161,485,799.00
Total assets, Dec. 31, 1952.	1,917,505,660.00

Property Investments

Railway, Rolling Stock and Inland Steamships	\$1,100,587,702.00
Ocean and Coastal steamships	62,922,995.00
Hotels, communications and miscellaneous properties	106,711,816.00
Improvements on leased property.	126,867,977.00
Stocks and bonds — leased railway companies	135,092,295.00

RAIL TRAFFIC FOR 1952

Freight

Freight revenue	\$376,858,445.00
Revenue freight tons	61,504,788.00
Average freight revenue per train-mile	10.05
Average revenue per ton of freight	6.13
Average revenue per ton-mile of freight (cents)	1.30
Classification of revenue tonnage carried:	
Products of agriculture	18,129,173.00
Animals and animal products	673,438.00
Products of mines	19,285,959.00
Products of forests	6,700,199.00
Manufactures and miscellaneous	15,672,010.00
<hr/>	
Total carload traffic.	60,460,779.00
All less carload freight	1,044,009.00
<hr/>	
Total carload and less carload traffic	61,504,788.00

Passenger

Passenger revenue	\$38,958,376.00
Revenue passengers carried	9,868,075.00
Average passenger revenue per mile of road	2,289.00
Average passenger revenue per train-mile	1.89
Average revenue per passenger	3.95
Average revenue per passenger-mile (cents)	2.83

Mileage at December 31, 1952

EASTERN REGION

New Brunswick District.	841.3
Quebec District	1,619.0
Ontario District	1,419.7
Algoma District	1,221.8
Dominion Atlantic Lines	304.1
Quebec Central Lines	356.5

PRAIRIE REGION

Manitoba District	2,514.2
Saskatchewan District	3,627.7
Alberta District	3,121.1

PACIFIC REGION

British Columbia District	1,994.0	
	<hr/>	17,019.2
Canadian Pacific Electric Lines.		69.1
Controlled Railway Companies:		
Aroostook Valley Railroad.	31.9	
Minneapolis, St. Paul & Sault Ste.		
Marie Railroad.	3,222.9	
Duluth, South Shore and Atlantic		
Railroad.	538.8	
	<hr/>	3,793.6
		<hr/>
Total		20,881.9
		<hr/> <hr/>

Rolling Stock at December 31, 1952 *(Owned and leased, not including electric lines)*

MOTIVE POWER:

Steam Locomotives	1,622	
Diesel-electric units.	292	
	<hr/>	1,914

FREIGHT TRAIN CARS:

Box, Stock and Flat	63,392	
Refrigerator, Tank and Open-Top . .	15,381	
Conductors' Vans.	1,337	
	<hr/>	80,110

PASSENGER TRAIN CARS:

Coach and Tourist Sleeping	1,376	
Parlour, Standard Sleeping and Dining	458	
Baggage, Mail and Express	966	
	<hr/>	*2,800

Boarding, Tool and Other Work Cars . . .	6,086
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*Includes 20 cars in Toronto, Hamilton and Buffalo Line Service in which the Company owns 36.04% interest.

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